SUMMER RESIDENT BIRDS OF BREWSTER COUNTY, TEXAS.¹

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THE present paper embodies the avifaunistic results of a collecting trip in Brewster County, from June 14 to July 5, 1904, when it was my good fortune to accompany the State Mineralogical Survey. To the director of the Survey, my friend Dr. William B. Phillips, I am greatly indebted for all the facilities placed at my disposal.

The region is one very little known to zoölogists, though Messrs. Oberholser and Bailey have collected in the Chisos Mountains which lie at the southern part of the county. The County of Brewster is situated in the southwestern part of Texas, between the 103rd and 104th degrees of longitude, and the 29th and 30th of latitude. Its southern border is the Rio Grande. A detailed topographical map of this region is in process of preparation by the Mineralogical Survey. The trip commenced from the town of Alpine, in the northwest, on the Southern Pacific Railroad; we reached Altudo, about 12 miles to the east, June 14 and remained there until the 19th; Altudo has an altitude of 4750 feet. From there we proceeded due east to the town of Marathon, with an altitude of a little more than 4000 feet, where we spent two days; thence south, spending one night at Garden Springs (3750 feet), one at Miller's Wells, then south to Marley's Wells (4000 feet) where we camped from the 24th to the 27th of June; then south again to Chisos Pen (3120 feet) where I remained to July 6, from there making a trip of two days to Green Gulch (4700 to 6000 feet) in the Chisos Mountains.

The country traversed may be said to be characterized by high and abrupt sierras, of volcanic rocks and limestones, bordering on high plains thrown into series of what now appear as rolling hills. Everywhere are the heavy marks of erosion. There is but little water, here and there at long distances a rain pool in the mountain sides, or a marshy spring in the plains; water is so scarce

¹ Contributions from the Zoölogical Laboratory of the University of Texas.

that on most of the ranches the cattle are supplied from wells; and where the water lies there is apt to be an oasis in the desert, — shade from a group of cottonwood trees, but elsewhere on the plateau one looks in vain for shelter from the sun. Cacti, greasewood bushes, dwarfed mesquite, and sotol bushes compose the characteristic flora of the plains, and in large districts the brown, baked earth bears no grasses. The flora of the mountains is richer and more varied, and the Chisos is well timbered with small pines, red oak and other trees.

The fauna is richest on the mountain sides and the wooded cañons, poorest on the plains. The latter may be said to be essentially Sauropsidan and Hymenopterous: birds, lizards, ants and wasps, with few Lepidoptera and Arachnida. One reason for the lack of richness in the fauna of these high plateaus is to be found, I think, in the occasional destructive torrents which sweep over them from heavy rains on the mountains; only the ants seem to survive these deluges. For most of the year there is total lack of water, with now and then destructive rivers of it.

Specimens of all the species mentioned in the following list were secured, unless otherwise stated. This list contains all the species seen except two or three species of hawks and one woodpecker, which could not be identified. A longer time spent in the Chisos Mountains and along the Rio Grande (which I did not reach) would undoubtedly add considerably to the number in the list.

There can well be no question as to all these species being summer residents, on account of the time of the year, and of the fact that most of the birds were in moulting plumage, and many were immature.

- 1. Ægialitis vocifera. KILLDEER PLOVER. Alpine to Altudo, Marathon, Garden Spring; one or two pairs at each permanent spring.
- 2. Callipepla squamata. Scaled Partridge. Common along most of the route, on the plains rather than on the mountain sides. This is known locally as the "blue quail."
- 3. Cyrtonyx montezumæ mearnsi. Mearns Quail.— Two pairs at Green Gulch.
- 4. Columba fasciata. Band-tailed Pigeon. Oak Spring cañon, Chisos Mountains; quite abundant around springs whither they come to drink.

- 5. Zenaidura macroura. Mourning Dove. Several pairs observed at each of the camps.
- 6. Cathartes aura. Turkey Buzzard. Present, but not in large numbers, along the whole route.
- 7. Aquila chrysaëtos. Golden Eagle. A pair of these birds were seen each evening at Altudo as they came to roost in the side of a cliff. According to the ranchmen they are still rather common in the county.
- 8. Geococcyx californianus. Road-Runner; "Paisano Bird."—Garden Springs, Marley's Wells, Chisos Pen; not numerous.
- 9. Dryobates scalaris bairdi. Texan Woodpecker. Marley's Wells, Chisos Pen, Green Gulch; fairly common.
- 10. Phalænoptilus nuttallii nitidus. FROSTED POOR-WILL.—Altudo, Garden Spring, Marley's Wells, nesting on the mountain sides and strictly nocturnal.
- 11. Chordeiles virginianus. NIGHTHAWK. A variety of the species was seen at Altudo, but not secured; it had the peculiar dropping descent and booming noise not shared by the following.
- 12. Chordeiles acutipennis texensis. Texan Nighthawk. Common at Christmas Spring and Chisos Pen, crepuscular rather than nocturnal.
- 13. Aëronautes melanoleucus. WHITE-THROATED SWIFT. Seen and secured only at Green Gulch where there were about twelve pairs.
- 14. Trochilus colubris. Ruby-throated Hummingbird. Common at Altudo and Green Gulch, above the plains.
- 15 Tyrannus melancholicus couchi. Couch Kingbird.— One pair at Altudo.
- 16. Myiarchus cinerascens. Ash-throated Flycatcher. Common at Altudo, Marley's Wells, Green Gulch, Chisos Pen.
 - 17. Sayornis saya. SAY PHŒBE. Two pairs at Altudo.
- 18. Aphelocoma woodhousei. Woodhouse Jay. One secured, and others seen, about fifteen miles east of Alpine.
- 19. Aphelocoma couchi. Couch JAY. Common in Green Gulch, in the high timbered region of the mountains.
- 20. Corvus cryptoleucus. WHITE-NECKED RAVEN. A species of raven, which was possibly this one, was seen but not secured at Alpine, Altudo and Chisos Pen.
 - 21. Corvus americanus. American Crow. Seen at Marathon.
- 22. Molothrus ater. Cowbird. Either this species or its race, M. a. obscurus, was observed at most of the water holes visited, but none could be obtained.
- 23. Sturnella magna. Meadow Lark. A variety of this species was seen on the grassy plains at Altudo.
- 24. Icterus parisorum. Scott Oriole. Common at Altudo, Marley's Wells and Green Gulch.
- 25. Carpodacus mexicanus frontalis. House Finch. One pair at Altudo.
- 26. Passer domesticus. English Sparrow. Common in the town of Alpine.

- 27. Chondestes grammacus strigatus. Western Lark Sparrow. A few found on the plains just west of Altudo.
- 28. Amphispiza bilineata deserticola. DESERT SPARROW.—I am in doubt as to whether my specimens are of this race or of A. bilineata, for they seem somewhat intermediate. Common among the mesquite at Garden Spring, Marley's Wells and Chisos Pen, not ascending the mountains.
- 29. Peucæa cassini. Cassin Sparrow. Common on the plains from Altudo to Marley's Wells.
- 30. Aimophila ruficeps scottii. Scott Sparrow.— At Altudo, much less abundant than the preceding.
- 31. Aimophila ruficeps eremœca. Rock Sparrow.—Common in the timbered part of Green Gulch.
- 32. Pipilo maculatus arcticus. Arctic Townee. Common in the same locality as the preceding.
- 33. Pipilo fuscus mesoleucus. Cañon Townee. Fairly common from Altudo to Green Gulch, nesting on the sides of the mountains.
- 34. Pyrrhuloxia sinuata. ARIZONA PYRRHULOXIA. Marley's Wells and Chisos Pen, in mesquite thickets of the plains.
- 35. Guiraca cærulea lazula. Western Blue Grosbeak. Seen at Altudo, Garden Springs, and Green Gulch, but so shy that none were secured.
- 36. Cyanospiza versicolor. Varied Bunting.—One pair at Marley's Wells and at Chisos Pen.
- 37. Petrochelidon lunifrons. CLIFF SWALLOW.— A considerable number seen at Alpine, collecting mud for their nests.
- 38. Lanius Iudovicianus excubitorides. White-rumped Shrike.— One pair at Marley's Wells and at Chisos Pen.
- 39. Mimus polyglottos leucopterus. Western Mockingbird.— Common along the whole route, on the plains and in the lower parts of the cañons.
- 40. Toxostoma crissalis. Crissal Thrasher. Fairly common at Garden Spring and Marley's Wells.
- 41. Heleodytes brunneicapillus. Cactus Wren. Several found at Garden Spring.
- 42. Catherpes mexicanus conspersus. Cañon Wren.—Altudo, Marley's Wells, and Green Gulch, high up on the mountains.
- 43. Parus atricristatus. BLACK-CRESTED TITMOUSE.— Common in the higher part of Green Gulch.
- 44. Psaltriparus plumbeus. Lead-colored Bush-tit. Common on the mountain sides at Altudo and Green Gulch.
- 45. Psaltriparus lloydi. LLOYD BUSH-TIT. Timbered portion of Green Gulch.
 - 46. Auriparus flaviceps. VERDIN. Plains at Chisos Pen.
- 47. Polioptila plumbea. PLUMBEOUS GNATCATCHER. Common at Garden Spring, Marley's Wells, and Green Gulch; found mostly on the high plains.